CLAIMS:

1. A system for exposing a photopolymer with ultraviolet light, comprising:

a rotation system for rotating the photopolymer; and

a light source assembly arranged around the rotation system, the light source assembly including at least one light source providing a plurality of light outputs for directing light onto the photopolymer and being movable across a length of the photopolymer perpendicular to a direction of rotation of the photopolymer, the plurality of light outputs being arranged so that their light rays overlap one another, thereby continually exposing all points on the photopolymer with at least one light output.

2. The system of claim 1, wherein the light source assembly includes a plurality of light sources arranged around the rotating system to provide the plurality of light outputs.

3. The system of claim 2, wherein the plurality of light sources each comprise a plasma capillary lamp.

4. The system of claim 1, wherein the at least one light source includes a reflector coated with a dichroic coating that reflects only actinic radiation.

5. The system of claim 1, wherein the reflector has a geometry selected to control an illumination angle of light directed onto the photopolymer.

6. The system of claim 1, wherein the light source assembly includes a liquid cooled body supporting the at least one light source.

7. The system of claim 1, further comprising:

a control system coupled to the at least one light source for dynamically controlling an intensity of the plurality of light outputs.

8. The system of claim 1, wherein the light source assembly is configured with a toroidal geometry around the rotation system, having the light outputs directed toward the rotation system inside the toroidal geometry.

9. The system of claim 1, wherein the photopolymer is a printing plate, and the rotation system is a rotatable drum on which the printing plate is mounted.

10. The system of claim 1, wherein the photopolymer is a cylindrical printing sleeve that is rotatable by the rotation system.

11. A method of exposing a photopolymer with ultraviolet light, comprising:

rotating the photopolymer;

directing light from a light source assembly onto the photopolymer from all directions in an overlapping pattern, thereby continually exposing all points on the photopolymer with light; and

moving the light source assembly across a length of the photopolymer perpendicular to a direction of rotation of the photopolymer to expose all of the photopolymer.

12. The method of claim 11, wherein directing light from the light source assembly onto the photopolymer comprises energizing a plurality of light sources arranged around the photopolymer.

13. The method of claim 11, wherein each of the plurality of light sources comprises a plasma capillary lamp.

14. The method of claim 11, wherein each of the plurality of light sources include a reflector coated with a dichroic coating that reflects only actinic radiation.

15. The method of claim 14, wherein the reflector has a geometry selected to control an illumination angle of light directed onto the photopolymer.

16. The method of claim 11, further comprising liquid cooling the light source assembly.

17. The method of claim 11, further comprising dynamically controlling an intensity of the light provided by the light source assembly to control exposure of the photopolymer.

18. A system for ablating a photopolymer and exposing the photopolymer with ultraviolet light, comprising:

a rotation system for rotating the photopolymer;

an ablation assembly for ablating the photopolymer in a controlled pattern representing a graphical image; and

a light source assembly arranged around the rotation system, the light source assembly including at least one light source

providing a plurality of light outputs for directing light onto the photopolymer and being movable across a length of the photopolymer perpendicular to a direction of rotation of the photopolymer, the plurality of light outputs being arranged so that their light rays overlap one another, thereby continually exposing all points on the photopolymer with at least one light output.

19. The system of claim 18, wherein the light source assembly includes a plurality of light sources arranged around the rotating system to provide the plurality of light outputs.

20. The system of claim 19, wherein the plurality of light sources each comprise a plasma capillary lamp.

21. The system of claim 18, wherein the at least one light source includes a reflector coated with a dichroic coating that reflects only actinic radiation.

22. The system of claim 18, wherein the reflector has a geometry selected to control an illumination angle of light directed onto the photopolymer.

23. The system of claim 18, wherein the light source assembly includes a liquid cooled body supporting the at least one light source.

24. The system of claim 18, further comprising:

a control system coupled to the at least one light source for dynamically controlling an intensity of the plurality of light outputs.

25. The system of claim 18, wherein the light source assembly is configured with a toroidal geometry around the rotation system, having the light outputs directed toward the rotation system inside the toroidal geometry.

26. The system of claim 18, wherein the photopolymer is a printing plate, and the rotation system is a rotatable drum on which the printing plate is mounted.

27. The system of claim 18, wherein the photopolymer is a cylindrical printing sleeve that is rotatable by the rotation system.